AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently amended) A method for synthesizing carbon nanostructures comprising:

providing a substrate having a deposition mask;

depositing a bimetallic or trimetallic metalorganic layer on the substrate, wherein at least a portion of the bimetallic or trimetallic metalorganic layer is deposited on an unmasked portion of the substrate, and wherein the bimetallic or trimetallic metalorganic layer comprises an organic portion and an inorganic portion, and wherein the bimetallic or trimetallic metalorganic layer has a thickness between about 1 micron and about 30 microns;

removing the deposition mask from the substrate;

exposing said portion of the bimetallic or trimetallic metalorganic layer to air;

pyrolyzing ~~volatilizing~~ the organic portion of said portion of the bimetallic or trimetallic metalorganic layer to form a growth catalyst on the substrate; and

exposing the substrate to a carbon precursor gas at a deposition temperature to form carbon nanostructures.

2. (Currently amended) The method of claim 1, wherein the bimetallic or trimetallic metalorganic layer is selected from the group consisting of: iron phthalocyanine, molybdenum phthalocyanine, nickel phthalocyanine, copper phthalocyanine, and combinations thereof.

3. (Currently amended) The method of claim 1, wherein the bimetallic or trimetallic metalorganic layer is deposited by a physical vapor deposition process.

4. (Canceled)

5. (Original) The method of claim 1, wherein the deposition mask is composed of a metal oxide.

6. (Original) The method of claim 1, wherein the deposition mask is composed of a substance selected from the group consisting of silicon oxide and aluminum oxide.

7. (Original) The method of claim 1, wherein the unmasked portion of the substrate has a top surface composed of a metal oxide.

8. (Original) The method of claim 7, wherein the metal oxide is selected from the group consisting of silicon oxide, aluminum oxide, and magnesium oxide.

9. (Currently amended) The method of claim 1, wherein the organic portion of said portion of the bimetallic or trimetallic metalorganic layer is pyrolyzed ~~volatilized~~ by heating said portion of the bimetallic or trimetallic metalorganic layer to a temperature of between about 450°C and about 500°C.

10. (Currently amended) The method of claim 1, wherein said portion of the bimetallic or trimetallic metalorganic layer is exposed to air for between about 2 hours to about 4 hours.

11. (Original) The method of claim 1, wherein the growth catalyst comprises metal growth catalyst particles.

12. (Original) The method of claim 1, wherein the carbon precursor gas is methane.

13. (Original) The method of claim 1, wherein exposing the substrate to a carbon precursor gas comprises exposing the substrate to an atmosphere containing methane, argon, and hydrogen.

14. (Original) The method of claim 13, wherein the substrate is exposed to the carbon precursor gas for between about 15 minutes and about 60 minutes.

15. (Original) The method of claim 1, wherein the deposition temperature is about 700°C.

16. (Currently amended) The method of claim 1, wherein the bimetallic or trimetallic metalorganic ~~substance~~ layer is produced by deposition of a metalorganic substance and the

metalorganic substance is purified prior to deposition of the bimetallic or trimetallic metalorganic layer.

17. (Currently amended) The method of claim 1, wherein the exposing said portion of the bimetallic or trimetallic metalorganic layer to air is performed prior to removing the deposition mask from the substrate.

18. (Original) The method of claim 1, wherein said carbon nanostructures are single wall carbon nanotubes.

19. (Original) The method of claim 1, wherein said carbon nanostructures are one dimensional carbon nanostructures.

20-42. (Canceled).